

IN THE CLAIMS:

1. (currently amended) A flaky, isotropic SmFeN powdery magnet material prepared by roll-quenching a molten alloy and nitriding the alloy powder thus obtained to form a magnet alloy; the magnet alloy having an alloy composition of the formula, by atomic %:

$\text{Sm}_x\text{Fe}_{100-x-v}\text{N}_v$ wherein ~~7 < x < 12~~ $7 < x \leq 12$ and $0.5 \leq v \leq 20$, a TbCu_7 crystal structure, and flakes with a thickness of $10\text{-}40\mu\text{m}$.

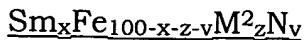
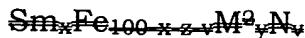
2. (currently amended) A flaky, isotropic SmFeN powdery magnet material prepared by roll-quenching a molten alloy and nitriding the alloy powder thus obtained to form a magnet ~~allow~~ alloy; the magnet alloy having an alloy composition of the formula, by atomic %:

$\text{Sm}_x\text{Fe}_{100-x-y}\text{M}^{1-y}\text{N}_v$

$\text{Sm}_x\text{Fe}_{100x-y-v}\text{M}^1\text{yN}_v$

wherein M^1 is at least one member selected from the group consisting of Hf and Zr; $7 \leq x \leq 12$ and $0.1 \leq y \leq 1.5$ and $0.5 \leq v \leq 20$, a TbCu_7 crystal structure, and flakes with a thickness of $10\text{-}40\mu\text{m}$.

3. (currently amended) A flaky, isotropic SmFeN powdery magnet material prepared by roll-quenching a molten alloy and nitriding the alloy powder thus obtained to form a magnet alloy; the magnet alloy having an alloy composition of the formula, by atomic %:



wherein M² is at least one member selected from the group consisting of Si, Nb, Ti, Ga, Al, Ta and C; 7 ≤ x ≤ 12, 0.1 ≤ z ≤ 1.0 and 0.5 ≤ v ≤ 20, a TbCu₇ crystal structure, and flakes with a thickness of 10-40µm.

4. (amended 5/29/01) A powdery magnet material according to claim 1, wherein up to 30 at.% of Sm is substituted with Ce.

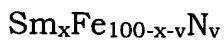
5. (amended 5/29/01) A powdery magnet material according to claim 1, wherein up to 30 at.% of Sm is substituted with a rare earth metal other than Ce.

6. (amended 5/29/01) A powdery magnet material according to claim 1, wherein up to 35 at.% of Fe is substituted with Co.

7. (amended 5/29/01) A powdery magnet material according to claim 1, wherein the average crystal grain size of the material is 10 nm to 0.5 µm.

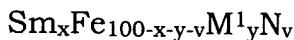
8. (amended 5/29/01) A powdery magnet material according to claim 1, wherein the magnet powder has an intrinsic coercive force of 7 kOe or higher .

9. (original, withdrawn) A process for preparing a flaky, isotropic SmFeN powdery magnet material recited in claim 1; which comprises the steps of combining and melting alloy components to form an alloy composition of the formula, by the atomic %:



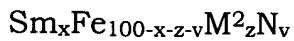
wherein $7 \leq x \leq 12$, and $0.5 \leq v \leq 20$; and the crystal structure being TbCu_7 type; spilling the molten alloy on a quenching roll or rolls which rotate at a peripheral speed of 30-45 m/sec., annealing the flaky powder thus obtained in an inert atmosphere at a temperature of 500-900°C; and then nitriding the annealed powder.

10. (original, withdrawn) A process for preparing a flaky, isotropic SmFeN powdery magnet material recited in claim 2; which comprises the steps of combining and melting alloy components to form and alloy composition of the formula, by atomic %:



wherein M^1 is at least one member selected from the group consisting of Hf and Zr; $7 \leq x \leq 12$, $0.1 \leq y \leq 1.5$ and $0.5 \leq v \leq 20$; the crystal structure being TbCu_7 type; spilling the molten alloy on a quenching roll or rolls which rotate at a peripheral speed of 20-45 m/sec., annealing the flaky powder thus obtained in an inert atmosphere at a temperature of 500-900°C, and then nitriding the annealed powder.

11. (original, withdrawn) A process for preparing a flaky, isotropic SmFeN powdery magnet material recited in the claim 3, which comprises the steps of combining and melting alloy components to form an alloy composition of the formula, by atomic %:



wherein M² is at least one member selected from the group consisting of Si, Nb, Ti, Ga, Al, Ta and C; $7 \leq x \leq 12$, $0.1 \leq z \leq 1.5$ and $0.5 \leq v \leq 20$; the crystal structure being TbCu₇ type; spilling the molten alloy on a quenching roll or rolls which rotate at a peripheral speed of 20-45 m/sec., annealing the flaky powder thus obtained in an inert atmosphere at a temperature of 500-900°C, and then nitriding the annealed powder.

12. (amended 5/29/01, withdrawn) A process for preparing according to claim 9, wherein the roll-quenching is carried out in argon gas atmosphere of a pressure ranging from 0.0001 Torr to 2 atms.

13. (amended 5/29/01) A process for preparing according to claim 9, wherein the roll-quenching is carried out using a quenching roll or rolls made of a metal selected from Cu, Cr-Cu alloy, or a Be-Cu alloy.

14. (amended 5/29/01) A bonded magnet made by processing the magnet powder according to claim 1 with a binder to the shape of a magnet. --

15. (added 05/29/01) A powdery magnet material according to Claim 2 wherein up to 30 at.% of Sm is substituted with Ce.

16. (added 05/29/01) A powdery magnet material according to Claim 3 wherein up to 30 at.% of Sm is substituted with Ce.

17. (added 05/29/01) A powdery magnet material according to Claim 2 wherein up to 30 at.% of Sm is substituted with a rare earth metal other than Ce.

18. (added 05/29/01) A powdery magnet material according to Claim 3 wherein up to 30 at.% of Sm is substituted with a rare earth metal other than Ce.

19. (added 05/29/01, withdrawn) A process for preparing according to Claim 10 wherein the roll-quenching is carried out in argon gas atmosphere of a pressure ranging from 0.0001 Torr to 2 atms.

20. (added 05/29/01, withdrawn) A process for preparing according to Claim 11 wherein the roll-quenching is carried out in argon gas atmosphere of a pressure ranging from 0.0001 Torr to 2 atms.